

COMMONWEALTH OF MASSACHUSETTS

MANDATED BENEFIT REVIEW

**REVIEW AND EVALUATION OF PROPOSED LEGISLATION
TO MANDATE COVERAGE FOR SCREENING TESTS
TO DETECT PROSTATE CANCER:**

SENATE BILL NO. 926

HOUSE BILL NOS. 170, 1515, AND 1121

**PROVIDED FOR:
THE JOINT COMMITTEE ON INSURANCE**

**DIVISION OF HEALTH CARE FINANCE AND POLICY
COMMONWEALTH OF MASSACHUSETTS
AUGUST 9, 2004**

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EXECUTIVE SUMMARY

This report was prepared by the Division of Health Care Finance and Policy pursuant to the provisions of M.G.L. c. 3, § 38C. This section requires the Division to evaluate the impact of a mandated benefit bill referred by legislative committee for review and to report to the referring committee within 90 days. The Division was requested to evaluate four bills pertaining to health insurance coverage for prostate cancer.

All four bills mandate coverage of two procedures to screen men for prostate cancer: the DRE (digital rectal evaluation) and the PSA (prostate-specific antigen) tests. In addition, one bill mandates coverage for the TRUS (transrectal ultrasonography) test. As discussed below, the expected increase in health care costs as a result of mandating these tests ranges from \$0.10 per to \$0.40 per member per year. However, a review of the scientific literature, and of the policies of eight professional organizations that researched prostate screening, indicated a lack of support for mandating any of these procedures.

INTRODUCTION

A recent study, published on May 27, 2004, in the New England Journal of Medicine¹, reinforced the conclusions of earlier studies that PSA scores are unreliable for identifying prostate cancer. The study conducted biopsies on men with normal PSA scores and found that fifteen percent of them had prostate cancer. DRE was less effective than PSA testing in identifying prostate cancer and TRUS was regarded as inappropriate for screening all together.

Another issue that complicates diagnosing prostate cancer is that some cancers pose a health risk and some do not. The inability to accurately distinguish between cancers that are life-threatening and those that are not results in the treatment of too many cancers. Men with non-life-threatening cancers often incur morbidity from the treatments (e.g., erectile dysfunction and urinary incontinence). Researchers have pointed to the need to find new biomarkers that would help differentiate biologically important tumors from those that are not important.

In spite of the lack of scientific evidence for screening, all of the health plans that responded to our survey cover the costs of PSA tests and DREs. The plans cover the cost of TRUS when it is clinically indicated and physician-recommended. Therefore, passage of any one or a combination of the four bills would not result in additional coverage for most insured individuals in Massachusetts.

The Division estimated the expected change in health care costs (should these bills become law) over five years. The Lewin Group, the Division's contracted actuary for this work, estimated that the additional annual premium costs in 2009 for H. 1121, S. 926 or H. 170 would amount to \$0.10 per member per year. The additional annual premium costs in 2009 for H. 1515 would be \$0.40 per member (see Appendix I).

It is impossible to weigh the costs and benefits of a screening tool that has yet to be developed. S. 926 and H. 170 both mandate coverage for the most reliable prostate cancer screening test available. In light of the widespread use and reimbursement for the somewhat unreliable PSA screening tool, it seems inappropriate to mandate a future technology for which we have no estimates of costs or efficacy.

BACKGROUND OF ISSUE

Prostate cancer was the most common type of newly diagnosed cancer among Massachusetts males between 1997 and 2001. Prostate cancer is a malignant tumor that often begins in the outer part of the prostate gland. In time, it may spread to other parts of the prostate gland and other parts of the body.² It is now the second leading cause of cancer death in men, exceeded only by lung cancer; it accounts for 29 percent of all male cancers and 11 percent of male cancer-related deaths in the United States. The national figures are very similar to the Massachusetts-specific incidence and mortality rates which are 30.4 percent and 11.5 percent, respectively.

In 2004, approximately 230,110 new cases and 29,900 prostate cancer-related deaths will occur in the United States. Age-adjusted incidence rates increased steadily over the past several decades, with dramatic increases associated with the widespread use of PSA screenings in the late 1980s and early 1990s, followed by a more recent fall in incidence.³

The risk factors for the disease include increased age, African-American race, family history, and diet. Eighty percent of prostate cancers are diagnosed in men over the age of 65.⁴ Until recently, PSA scores below 4 were regarded as “nothing to worry about,”⁵ but recent research findings have called this benchmark into question.⁶

DEFINITIONS

Prostate specific antigen (PSA): This test measures the bloodstream level of PSA released by prostate cells. When greater than 4 nanograms of PSA are present in a milliliter of blood, doctors usually recommend a biopsy (a procedure during which a needle is inserted into the prostate to withdraw cells for analysis).

Digital rectal evaluation (DRE): During this procedure, a physician manually checks the endmost portion of the colon to identify abnormal growths or prostate enlargement.

Transrectal ultrasonography (TRUS): This procedure is an ultrasound image of the prostate gland. It is used to further investigate the possibility of prostate cancer in men with abnormal PSA (greater than 4) and DRE results. It is also used to guide a needle biopsy.⁷

OVERVIEW OF PROPOSED LEGISLATION

On January 6, 2004, the Joint Committee on Insurance requested that the Division review and evaluate four bills pertaining to health insurance coverage for prostate cancer:

- S. 926 *An Act Providing for Greater Insurance Coverage of Prostate Cancer Exams*, sponsored by Senator Wilkerson
- H. 170 *An Act Providing for Greater Insurance Coverage of Prostate Cancer Exams*, sponsored by Representative Hynes
- H. 1515 *An Act Relative to Health Insurance Coverage for Diagnostic Screening for Prostate Cancer*, sponsored by Representative Fennell
- H. 1121 *An Act Providing Medical Coverage for the Prostatic Specific Antigen Blood Test*, sponsored by Representative Kafka

Each of the four proposed bills would require all health insurers to assure coverage for a PSA prostate cancer screening test. S. 926 and H. 170 would require PSA tests and DREs (or the most reliable, medically recognized test) to screen for prostate cancer. H. 1515 would require coverage for a PSA, DRE, and TRUS to screen for prostate cancer. Table 1 outlines the major characteristics of each of the four proposals:

TABLE 1. SUMMARY OF PROSTATE CANCER SCREENING BILLS

	H. 1121	S. 926	H. 170	H. 1515
Mandated insurance coverage for:	PSA test to screen for prostate cancer	PSA and DRE (or most reliable, medically recognized test) to screen for prostate cancer	PSA and DRE (or most reliable, medically recognized test) to screen for prostate cancer	PSA, DRE, and TRUS to screen for prostate cancer
Qualifiers:				
Demographic criteria	All ages (no age restrictions)	Men ≥ 50 when counseled for prostate cancer by physician; men ≥ 40 at high risk per physician, or African-American	Men $>50 < 75$ when counseled for prostate cancer by physician; men ≥ 40 at high risk per physician or African-American	All men >40 ; all men, regardless of age, who have a history of prostate cancer
Other clinical criteria		To monitor prostate cancer treatment or determine need for bone scan	To monitor prostate cancer treatment or determine need for bone scan	
Frequency	None stated	None stated	None stated	Annually for men >40
Types of health plans for which coverage is mandated	175; 176A, 176B, 176G (<i>see below</i>)	175; 176A, 176B, 176G (<i>see below</i>)	175; 176A, 176B, 176G (<i>see below</i>)	Every contract which provides coverage for hospital, surgical or medical care
Currently covered Medicare benefit	PSA and DRE are covered	PSA and DRE are covered	PSA and DRE are covered	TRUS is not covered as a screening tool

Notes:

175: For individual and group members having a principal place of employment in Massachusetts.

176A: For Massachusetts residents, individuals, and group members principally employed in Massachusetts.

176B & 176G: For any group and individual members who are Massachusetts residents, and for all group members who are principally employed in Massachusetts.

SCREENING FOR PROSTATE CANCER

According to a brief published in February 2004 by the National Cancer Institute, “Prostate cancer screening is controversial due to the lack of definitive evidence of benefit. First, many tumors are missed in screening. Second, it can be difficult to determine which tumors pose a risk to a patient and which tumors are less dangerous to the person than would be the tumor’s treatment.”⁸ It is important to be able to distinguish which tumors are dangerous and which are not, because for every 100 men diagnosed with prostate cancer, only 38 will die from it.⁹

Table 2 describes various organizations’ recommendations for using DREs, PSAs, and/or TRUSs as screenings for prostate cancer. While some organizations recommend annual screenings for men aged 50 and over, most recommend that patients and their doctors discuss both the potential risks and benefits of cancer screening.¹⁰

TABLE 2. PROFESSIONAL ORGANIZATIONS' POLICIES ON PROSTATE CANCER SCREENING

Organization	Guidelines/Recommendations	
American Academy of Family Practitioners	PSA	Insufficient evidence to recommend for or against routine screening; however, recommends counseling men aged 50 and older about the risks and possible, but unknown, benefits of PSA testing ¹¹
	DRE	Insufficient evidence to recommend for or against routine screening
US Preventive Services Task Force (USPSTF)	PSA	Insufficient evidence to recommend for or against routine screening
	DRE	Insufficient evidence to recommend for or against routine screening
American Urologic Association & American Cancer Society ¹²	PSA and DRE	After informing patient about the benefits and limitations of screening, annual PSA and DRE tests are recommended for men over the age of: <ul style="list-style-type: none"> ▪ 50 who have at least 10-year life expectancy ▪ 45 who are at high risk ▪ 45 who are African-American
Canadian Task Force on Preventive Health Care	DRE	Poor evidence to include or exclude for men over 50 years old
	PSA	Exclusion is recommended on the basis of low positive predictive value; fair evidence to exclude from routine screening for asymptomatic men over age 50
	TRUS	Fair evidence to exclude from the periodic health exam of asymptomatic men over age 50
Empire Medicare Services, NY	TRUS	By itself, TRUS has no validity as a screening test; it is appropriate to determine if a biopsy should be performed or to stage a carcinoma
National Cancer Institute (outside peer review panel)	PSA	There is insufficient evidence to determine if mortality decreases with PSA screening
American Society of Clinical Oncology	PSA	The group's policy panel has found insufficient evidence to warrant any recommendation
American Medical Association ¹³	PSA and DRE	Launching mass screening programs for the early detection of prostate cancer is premature at this time. If a patient (with a life-expectancy of at least 10 years) elects to be screened after being informed of the benefits and harms of prostate screening, those most likely to benefit are: <ul style="list-style-type: none"> ▪ men over age 50 ▪ men over age 40 with family history ▪ African-American men over age 40
American College of Physicians & American Society of Internal Medicine	PSA	Recommends individualized decision-making based on a variety of considerations: <ul style="list-style-type: none"> ▪ Patient and physician preferences after evaluating potential benefits and risks of screening ▪ Black men and men with a family history should be made aware of their higher lifetime risk of prostate cancer. However, no evidence to suggest routine screening at an earlier age (40 years).
	TRUS	TRUS should be reserved for further investigation in men with abnormal PSA and DRE, and to guide biopsies; it should not be used as a primary screening test

ORGANIZATIONS THAT SUBMITTED INFORMATION TO DHCFP

DHCFP developed a survey for members of the Massachusetts Association of Health Plans (MAHP) to complete. MAHP returned the completed surveys to DHCFP on behalf of four of MAHP's member health plans. One other carrier submitted its responses separately.

CURRENT COVERAGE LEVELS

All five carriers that completed our survey cover both PSA exams and DREs for prostate cancer screening. TRUS is covered "when medically necessary," a term which is determined by each plan individually (see Table 3).

The federal Employee Retirement Income Security Act (ERISA) precludes state laws from applying to self-insured benefit plans and their members. The 2001 Massachusetts Employer Health Insurance Survey found that approximately 27 percent of Massachusetts employees enrolled in employer-sponsored health plans were covered by plans that were self funded; therefore, this analysis uses 27 percent as the percent of self insured in Massachusetts who would be exempt from this legislation. However, many self-insured employers voluntarily adopt state mandates. The actuarial calculations included in this report use fully insured individuals as the basis for calculations.

Coverage for Prostate Screening for Individuals Aged 40 and older

Table 3 summarizes prostate screening coverage policies for each of six health carriers (Plans 1-6).

Table 4 summarizes procedure costs for each of five health plans (Plans A-E).

(Note: Plans 1-6 in Table 3 do not correspond to Plans A-E in Table 4)

TABLE 3. CURRENT PSA AND TRANSRECTAL ULTRASONOGRAPHY COVERAGE

	Plan 1	Plan 2	Plan 3	Plan 4	Plan 5	Plan 6
Time period	CY 03	CY 03	CY 03	CY 03	CY 03	CY 03
# of male members aged 40 – 50	1,253	86,318	18,656	1,695	67,426	56,658
# of male members aged 50 – 65	1,224	75,981	18,927	1,026	61,761	58,849
TRUS covered under what circumstances?	Experimental and investigational, i.e., not covered for cancer screening	When medically necessary or non-routine indication per MD; not covered in absence of signs of disease or condition	Available to all members, per their MD	“We cover diagnostic testing”	Discretion of member’s MD	“Do not cover TRUS for prostate cancer screening under any circumstances”
Appeals for coverage of TRUS?	Unknown	No	Does not track appeals this way	No	No	Yes
# of TRUS Appeals	n/a	n/a	n/a	n/a	n/a	7
Can plan identify # of PSA tests?	Yes	Yes	Yes	No	Yes	Yes
% of Men 40 – 49 who received PSA Test.	15%	15%	11%	8%	13%	14%
% of Men 50 – 64 who received PSA Test.	43%	50%	50%	24%	48%	53%
How many TRUSs were submitted for men aged 40–50?	10	265	Cannot distinguish transrectal from other ultrasound	5	101	167
How many TRUSs were submitted for men aged 50–65?	61	1,722	n/a; see above	5	734	1,312

COST OF PROSTATE SCREENING

TABLE 4. PROCEDURE COSTS

Procedure	Plan A Cost	Plan B Cost	Plan C Cost	Plan D Cost	Plan E Cost
Average Cost of PSA test	\$30.56	\$27.84	Approx. \$85.00	\$37.00	\$28.50 – 33.62
Average Cost of TRUS	\$73.08	n/a	Approx. \$500.00	\$102.00	\$114.13 – \$148.13

MEDICAL EFFICACY

DHCFP is charged with reporting the following: 1) the expected impact of the benefit on the quality of patient care and the health status of the population, and 2) the results of any research demonstrating the medical efficacy of the treatment or service compared to alternative treatments or services, or *not* providing the treatment or service.

Efficacy of PSA:

Recent studies have cast a great degree of uncertainty on the use of PSA values in screening for prostate cancer. A PSA level of 4.0 ng per milliliter or greater has been considered abnormal, indicating a risk of cancer, while a PSA value below 4 has been considered to be normal. However, a study recently found that many men with a PSA level of less than 4 had cancer. This study also confirmed earlier findings that many men with PSA levels of 4 and greater did not have cancer.

On May 27th 2004, *The New England Journal of Medicine* published the results of a study that quantified the errors in using PSA tests to identify prostate cancer. The study protocol involved conducting biopsies in men with PSA scores of less than 4 (the benchmark to suggest they were cancer free). Fifteen percent of those men were identified, after having biopsies, as having prostate cancer.¹⁴ The uncertainty around the efficacy of the PSA test has led some researchers to recommend lowering the PSA threshold from 4.0 to 2.6¹⁵, in the belief that it would increase the number of currently undiagnosed prostate cancers. Although reducing this would identify more cancers, it would also increase the number of false positives, and would increase the indirect cost of providing the PSA screening, owing to the increase in biopsies requested as a result of those tests.¹ On the other hand, one study revealed that only 22 percent of a sample of men with PSA levels between 4 and 10 had cancer, illustrating the number of unnecessary biopsies being performed.¹⁶

An article was published on July 8, 2004, in the *New England Journal of Medicine* that concluded that the speed at which PSA levels rise may help predict the likelihood of death from prostate cancer. Perhaps these results will eventually lead to more accurate ways to match patients with appropriate treatments.^{17,18} The authors did not speculate on the likelihood of using the rate of change of PSA levels as a screening tool.

ⁱ Most screening tools have a certain amount of false positives as no test is perfect owing to the fact that causation of the disease is unknown and some individuals may have symptoms and growths that might be benign.

Efficacy of DRE:

DRE is not a reliable screening tool. Among samples of men with abnormal DRE results, only 6 to 34 percent, with most common rates in the 25 percent range, had cancer.¹⁹ Some studies suggest conducting biopsies on men whose PSA or DRE results are abnormal, which would also result in a higher rate of false positives.²⁰ A higher rate of false positives would increase the indirect costs associated with PSA testing, as more biopsies would likely be recommended. To our knowledge, DRE is not currently a separate, billable item, but rather, included in a standard physical exam fee.

Uncertainty around Treatment:

Clinicians are faced with two major hurdles with respect to diagnosing prostate cancer: identifying all individuals who have cancer (as described above), and distinguishing life-threatening cancers from those that are not. As a result, some life-threatening cancers are not detected until it is too late, and other cancers, that would not pose a risk, are treated, possibly resulting in significant morbidity (please refer to Table 5). Researchers have pointed to the need to find new biomarkers that would help differentiate biologically important prostate tumors from unimportant ones.²¹

TABLE 5.²² PROSTATE CANCER TREATMENT SIDE EFFECTS

Treatment	Side Effect	Frequency
Radical Prostatectomy	Erectile dysfunction Urinary Incontinence	20-70 % 15-50 %
External beam radiation therapy	Erectile dysfunction Urinary Incontinence	20-45 % 2-16 %
Androgen deprivation therapy	Sexual dysfunction Hot flashes	20-70 % 50-60 %
Watchful waiting	Erectile dysfunction	30 %

Need for Early Screening among African-Americans:

S. 926 and H. 170 require coverage for early prostate cancer screening (40 years and older) among individuals with high risk (per physician discretion), including African-American men. Studies have shown that racial and ethnic differences exist in prostate cancer incidence and mortality.²³ Black men are more likely than white men to have cancer if they have a PSA value of greater than 4, suggesting that the risk for prostate cancer differs by race. In addition, SEER (Surveillance, Epidemiology, and End Result) cancer statistics show a higher incidence of and mortality from prostate cancer among African-Americans when compared to Caucasians (refer to Figure 1).²⁴

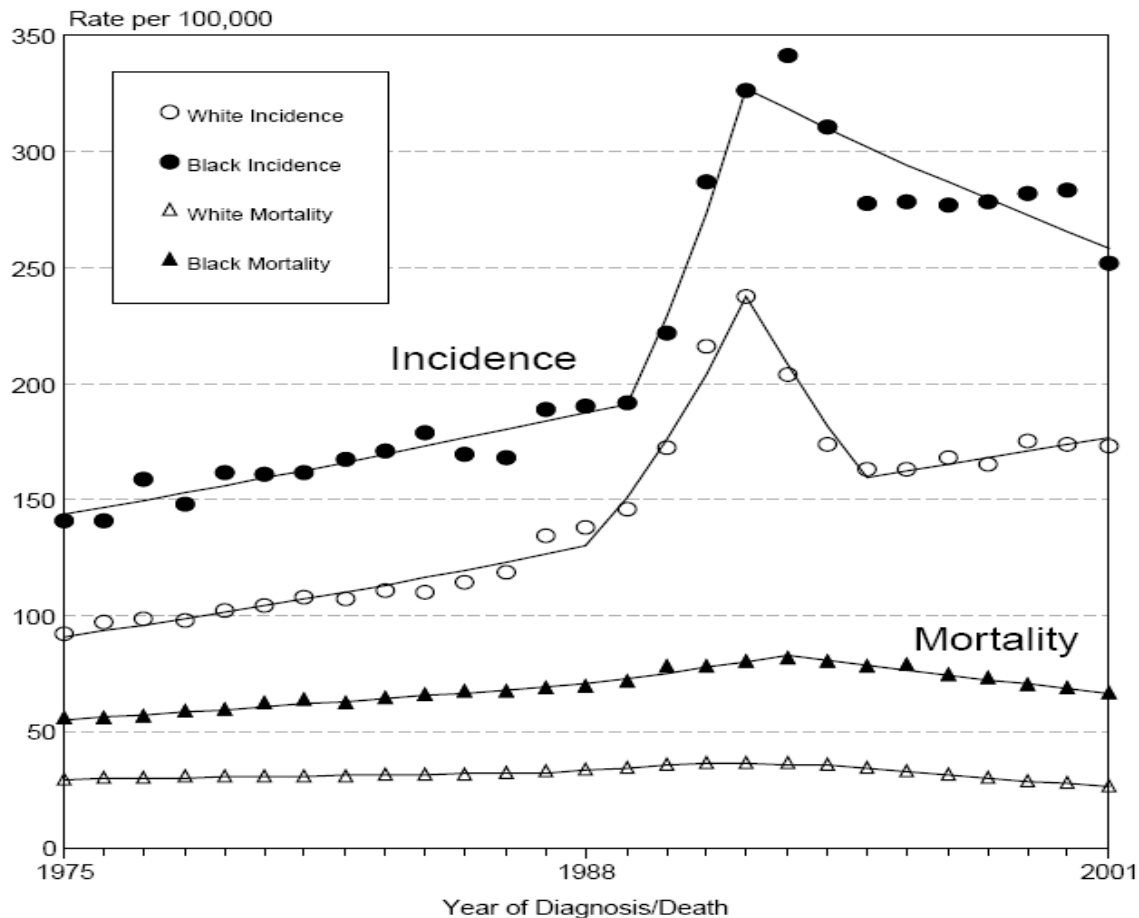


Figure 1: Incidence of and mortality from prostate cancer among blacks and Caucasians. Black men have a higher incidence of and die more frequently from prostate cancer than Caucasian men.

Studies have suggested that the reason for the discrepancy in survival figures tend to be related to all or some of the following: more aggressive tumors among African-Americans²⁵, unequal access to health care²⁶, socioeconomic status²⁷, and disparities in cancer treatment. These suggest that routine screenings in high-risk populations, such as African-Americans and individuals with family history, would be useful if it resulted in greater likelihood that tumors were detected at an earlier stage, when treatment is more likely to be successful.

However, in order to benefit from screening programs, individuals must be aware of their susceptibility to the disease, and the severity of it. More than half of African-Americans surveyed recently by the National Medical Association did not consider themselves at risk for the disease. Therefore, the American Cancer Society and other institutions recommend that providers explain the benefits and risks of screening and allow the patient to make an informed decision on whether they should undergo screening.

FINANCIAL IMPACT OF MANDATE

The Lewin Group performed an actuarial analysis to determine whether health insurance premiums would increase due to these proposed mandates. Please refer to Appendix I for The Lewin Group's entire report.

DHCFP is required by Section 3 of Chapter 300 of the Acts of 2002 to answer the following questions:

- 1. The extent to which the proposed insurance coverage would increase or decrease the cost of the treatment or service over the next 5 years.*

All major carriers already cover two out of the three proposed screening tests; therefore, it does not seem likely that passage of these proposals would add much to the cost of premiums. It is possible that there will be a small increase in eligible men who ask for the test if this mandate passes and enrollees are made aware of such passage. The Lewin Group's best (medium) estimate of increased premium costs per member per year appears below:

TABLE 6. ESTIMATES COST EFFECT OF PROSTATE CANCER SCREENING BILLS

Bill	2005 Increase in Gross Premium	2009 Increase in Gross Premium
H. 1121, S. 926, H. 170	\$0.02	\$0.03
H. 1515	\$0.12	\$0.16

If there is a substantial increase in the number of men tested, then there will likely be an increase in the number of follow-up exams, tests, and biopsies, some of which will be lifesaving, and others of which will prove to be unnecessary. These cost estimates do not include indirect costs of additional biopsies, exams, and tests that may result from increased utilization of PSA tests.

- 2. The extent to which the proposed coverage might increase the appropriate or inappropriate use of the treatment or service over the next 5 years.*

Some medical experts consider that the current widespread use of PSA testing to be inappropriate given its mixed predictive capabilities. Mandating the testing would give the test more of an official imprimatur than some feel it merits.

- 3. The extent to which insurance coverage may affect the number and types of providers of the mandated treatment or service over the next 5 years.*

No effect is predicted on the number and types of providers.

- 4. The extent to which the mandated treatment or service might serve as an alternative for more expensive or less expensive treatments or services.*

Not applicable (no alternative services).

5. *The effects of the mandated benefit on the cost of health care, particularly the premium, administrative expenses, and indirect costs of large and small employers, employees, and non-group purchasers.*

The actuary developed a simulation model that tested several assumptions regarding possible effects of the mandate on utilization, different trends in overall premiums, and different population growth trends. The estimated increases in costs for each of the bills are summarized in Table 7.

TABLE 7. RANGE OF CHANGE IN PREMIUMS OVER A 5-YEAR PERIOD

Bill Number	Low Estimate		High Estimate	
	2005	2009	2005	2009
H. 1121	\$0.00	\$0.00	\$0.04	\$0.06
S. 926	\$0.00	\$0.00	\$0.00	\$0.03
H. 170	\$0.00	\$0.00	\$0.00	\$0.03
H. 1515	\$0.00	\$0.00	\$0.11	\$0.15

6. *The potential benefits and savings to large and small employers, employees, and non-group purchasers.*

No likely effect on small or large employers, employees, or non-group purchasers except to the degree that large employers tend to be self insured and therefore may choose not to abide by this mandate.

7. *The effect of the proposed mandate on cost-shifting between private and public payers of health care coverage.*

Cost-shifting is unlikely.

8. *The cost to health care consumers of not mandating the benefit in terms of out-of-pocket costs for treatment or delayed treatment.*

Most insurers already cover prostate cancer screening on a routine basis or when “medically necessary.” It is unlikely that not mandating such coverage will cause the insurers to discontinue such coverage, although if there is a continuing stream of evidence showing flaws in the tests, they may discontinue coverage of these particular tests as better tests become available.

9. *The effects on the overall cost of the health care delivery system in the Commonwealth.*

These bills would likely have a minimal effect on the Commonwealth’s health care delivery costs.

LEGISLATIVE ACTIVITY IN OTHER STATES

As of June 2004, the National Conference of State Legislatures reported that twenty-six states require insurance coverage of prostate cancer screening.

ENDNOTES

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Appendix I



^eLEWIN GROUP

Actuarial Assessment of Proposed Legislation to Mandate Coverage for Screening Tests to Detect Prostate Cancer: Senate Bill No. 926 and House Bills Nos. 170, 1515, and 1121

Prepared for:

**Division of Health Care Finance and Policy
Commonwealth of Massachusetts**

June 30, 2004

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I. EXECUTIVE SUMMARY RESULTS

The Massachusetts Division of Health Care Finance and Policy retained The Lewin Group to perform an actuarial assessment of four proposed bills, each of which would mandate that health insurance plans or policies for Massachusetts residents provide coverage for screening tests to detect prostate cancer. (Due to the ERISA preemption, none of these bills would affect self-insured employee benefit plans.) The following table, based on information provided by the Division, summarizes the relevant provisions of each of the four proposed bills.

BILL:	HB 1121	SB 926	HB 170	HB 1515
SERVICES COVERED:	Prostate Specific Antigen (PSA) Test to screen for prostate cancer	PSA and Digital Rectal Exam (DRE) or most reliable medically recognized test to screen for prostate cancer	PSA and DRE or most reliable medically recognized test to screen for prostate cancer	PSA, DRE and transrectal ultrasonography (TRUS) to screen for prostate cancer
DEMOGRAPHIC CRITERIA:	All men (no age restrictions)	Men 50 or older (when counseled by physician); + Men 40 or older at high risk (per physician) or African American	Men between 50 and 75 (when counseled by physician) + Men 40 or older at high risk (per physician) or African American	Men over 40 + All men (regardless of age) with a history of prostate cancer
OTHER CLINICAL CRITERIA:		To monitor prostate cancer treatment or determine need for bone scan	To monitor prostate cancer treatment or determine need for bone scan	
FREQUENCY:	(not stated)	(not stated)	(not stated)	Annually

All of the plans surveyed by the Division of Health Care Finance and Policy already cover two of the three proposed screening tests (prostate specific antigen and digital rectal exam). Only transrectal ultrasonography, which is proposed by only one of the four bills, is not a covered benefit for prostate cancer screening. Therefore it is unlikely that passage of these proposals would add much to the cost of premiums. It is possible that a small increase in eligible men will ask for a prostate screening test if it becomes a mandated benefit. The Division asked Lewin to estimate changes in healthcare costs (in the first and fifth fiscal years following fiscal year 2004) that would be attributable to the four mandated benefits. Our best (medium) estimate of increased premium costs per member per year appears below:

Bill	2005 Increase in Gross Premium	2009 Increase in Gross Premium
House Bill No. 1121 Senate Bill No. 926 House Bill No. 170	\$0.02	\$0.03
House Bill No. 1515	\$0.12	\$0.16

II. RESULTS

The actuarial assessment includes estimates of the following:

- The total number of Massachusetts residents who are covered by plans or policies that would be affected by the proposed bills, including (a) fully-insured employment-based plans and (b) direct purchase policies
- The increase in the total number of covered persons that is expected to occur between the base year of the projection (2004) and the last year of the projection period (2009)
- The average annual and monthly gross premium (including insurer expenses) and the average annual and monthly net benefit cost (i.e., claims cost) for these plans and policies, per covered person, under current law (i.e., in the absence of the proposed bills)
- The anticipated underlying trend (i.e., annual increase) in per-member benefit costs and premiums – that is, the increase that would occur in the absence of the proposed bills

- The proportion of covered persons in Massachusetts who satisfy the demographic criteria for each of the proposed bills, in terms of age, race, and history of (or risk for) prostate cancer
- The current degree of insurance coverage for the services specified in the proposed bills – that is, the proportion of members or policyholders who currently have coverage for these services, adjusted (if necessary) for any coverage restrictions currently in place
- The current utilization rates for the services specified in the proposed bills, and the target utilization rates based on the recommendations of various medical professional organizations
- The anticipated increase in utilization for these services that would occur as a result of enactment of each of the proposed bills
- The projected increase in per-member and total benefit costs and premiums that would occur as a result of enactment of each of the proposed bills, based on the anticipated utilization increase and the current unit cost for the specified services (adjusted for underlying cost trends in future years).

The cost projections included in this analysis are based on the assumption that whichever proposed bill is passed would go into effect at the beginning of 2005. Five-year population and cost projections (through 2009) were developed under a variety of scenarios. Low, medium (or “best estimate”), and high values were selected for the following key input variables: (a) the number of persons affected by the legislation, (b) the underlying trend in per-member health insurance costs, and (c) the impact of the mandate on the utilization of specified services.

* * * * *

The results of our analysis are presented in the exhibits below, labeled Part 1a through Part 3.

Parts 1a through 1c of our analysis show projections of health insurance costs **before** estimating the effects of the four proposed bills, if any were enacted:

- Part 1a shows the projected population and costs under medium or “best estimate” assumptions, both for the size of the affected population (i.e., the number of persons covered by fully insured plans) and for the underlying trend in per-member costs. The projected costs include the annual net benefit costs and the annual gross premiums, both on a per-member basis and for the total fully insured population.

- Part 1b shows the projected population and costs under both low and high assumptions for the size of the affected population. This indicates the range of results that could occur in the number of affected – i.e., fully insured – persons in Massachusetts (2.0 to 3.4 million) and in the total (annual) cost for their health insurance (\$10.1 - \$16.8 billion for the benefit cost and \$11.4 to \$19.1 billion for the gross premium), due solely to variations in the population parameters from our “best estimate” assumptions.
- Part 1c shows the projected population and costs under both low and high assumptions for the underlying trend in per-member costs. This indicates the range of results that could occur in the annual per-member cost for health insurance (\$4,673 to \$5,268 for the benefit cost and \$5,310 to \$5,987 for the gross premium) and in the total cost for all fully insured persons in Massachusetts (\$11.0 - \$12.4 billion for the benefit cost and \$12.5 to \$14.1 billion for the gross premium), due solely to variations in the underlying cost trend from the medium assumption.

Again, the projections shown in these exhibits assume no new mandated benefits (including the proposed mandates reviewed in this analysis). The sources and/or derivations for the low, medium (or “best estimate”), and high population and trend assumptions are described in Section III of this report. The estimated costs of the four bills are described in parts 2 and 3.

Parts 2a through 2c(ii) provide a set of estimates of the cost effect of the proposed bills, all using the medium or “best estimate” assumptions for the size of the affected population and the underlying trend in per-member costs. Part 2a corresponds to the low-impact assumption regarding the cost effect of the proposed bills, Part 2b (i and ii) corresponds to the medium-impact assumption, and Part 2c (i and ii) corresponds to the high-impact assumption.

- The low-impact assumption is that none of the proposed bills would have any effect on health insurance costs. Since this means that projected health insurance costs under any of the proposed bills would be identical to the projected costs under current law as shown in Part 1a, we have left the projected cost numbers out of Part 2a, and we simply refer those readers who want to see the numbers back to Part 1a.
- The medium-impact assumption for HB 1121, SB 926, or HB 170, as shown in Part 2b(i), is that each of these bills (which would mandate coverage for PSA testing and DRE), if enacted, would raise health insurance costs by 0.0005%. The medium-impact assumption for HB 1515, as shown in Part 2b(ii), is that this bill (which also mandates coverage for TRUS), if enacted, would raise health insurance costs by 0.0029%.
- The high-impact assumption for HB 1121, SB 926, or HB 170, as shown in Part 2c(i), is that each of these bills, if enacted, would raise health insurance costs by 0.0011%. The high-impact assumption for HB 1515, as shown in Part 2c(ii), is that this bill, if enacted, would raise health insurance costs by 0.0057%.

The extremely low level of anticipated cost impacts (ranging from less than 1/1000th of 1% to less than 1/100th of 1%) is attributable to two factors: (a) The expected increment to the utilization rates for the services specified in the proposed bills is quite low, ranging from 0.11% to 0.31% for PSA/DRE and from 0% to 0.33% for TRUS. (b) The extra cost (i.e., the utilization increment times the unit cost for the specified service, summed across both services) is then spread over *all* fully insured persons, not just those who meet the demographic criteria of the proposed bills.

In each case, the cost impact is a one-time addition to the underlying trend, occurring in the first year (2005) that one of the four bills is assumed to be in effect. Note that, based on the National Health Expenditure (NHE) projections produced by the Centers for Medicare and Medicaid Services (CMS), we already were anticipating a decrease in the underlying trend from 8.3% for 2004 to 7.9% per year from 2005 through 2009. Thus, even with the cost impact of the mandate added in, the total trend decreases from 2004 to 2005 under all three cost-impact scenarios.

In the bottom half of each of these exhibits, we show the *increase* both in the per-member cost and in the total cost for fully insured persons for each year on a dollar basis. (This is compared to the “current law” projections from Part 1a.) Note that the increase is \$0 for 2004, since the mandate is not assumed to go into effect until 2005.

Parts 3 is a summary of the results shown in Parts 2a through 2c(ii). Each line shows the increase in annual cost (in terms of the net benefit cost and the gross premium), for the first and last years of the projection period (2005 and 2009), both on a per-member basis and for all fully insured Massachusetts residents combined. The first three lines of the table show the results under the low-, medium-, and high-impact scenarios, respectively, that would be expected under HM 1121, SB 926, or HB 170. The last three lines show the expected results under each cost-impact scenario if HB 1515 were to be enacted. As was the case for Parts 2a through 2c(ii), the expected results shown in Part 3 all assume the medium or “best estimate” scenario for the size of the affected population and the underlying trend in per-member costs.

Cost Projections for Prostate Screening Mandates

Part 1a: Projected Health Insurance Costs Under Current Law

(Population Projection: Best Estimate)

(Underlying Trend in Per-Member Costs: Medium)

	2004	2005	2006	2007	2008	2009
POPULATION PROJECTION						
Total MA Population	6,446,289	6,459,181	6,472,100	6,485,044	6,498,014	6,511,010
<i>Growth rate</i>	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
BEST ESTIMATE OF POPULATION:						
Covered by Health Ins.	5,859,677	5,871,396	5,883,139	5,894,905	5,906,695	5,918,508
<i>Percent of total population</i>	90.9%	90.9%	90.9%	90.9%	90.9%	90.9%
Fully Insured *	2,338,011	2,342,687	2,347,372	2,352,067	2,356,771	2,361,485
<i>Pct. of covered population</i>	39.9%	39.9%	39.9%	39.9%	39.9%	39.9%
* Including direct purchase						

PER-MEMBER PER-MONTH COST						
Net Benefit Cost	\$282.78	\$305.12	\$329.22	\$355.23	\$383.30	\$413.58
<i>Underlying trend</i>	8.3000%	7.9000%	7.9000%	7.9000%	7.9000%	7.9000%
Gross Premium	\$321.34	\$346.73	\$374.12	\$403.67	\$435.56	\$469.97
<i>Margin as % of gross premium</i>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
ANNUAL COST PER MEMBER						
Net Benefit Cost	\$3,393	\$3,661	\$3,951	\$4,263	\$4,600	\$4,963
Gross Premium	\$3,856	\$4,161	\$4,489	\$4,844	\$5,227	\$5,640
TOTAL COST FOR FULLY INSURED PLANS						
Benefit Costs (\$millions)	\$7,934	\$8,578	\$9,274	\$10,026	\$10,840	\$11,720
Gross Premiums (\$millions)	\$9,016	\$9,747	\$10,538	\$11,394	\$12,318	\$13,318

Cost Projections for Prostate Screening Mandates

Part 1b: Projected Health Insurance Costs Under Current Law

(Population Projections: Low and High)

(Underlying Trend in Per-Member Costs: Medium)

	2004	2005	2006	2007	2008	2009
POPULATION PROJECTION						
Total MA Population	6,446,289	6,459,181	6,472,100	6,485,044	6,498,014	6,511,010
<i>Growth rate</i>	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
LOW POPULATION ESTIMATES:						
Covered by Health Ins.	5,801,660	5,813,263	5,824,890	5,836,540	5,848,213	5,859,909
<i>Percent of total population</i>	90.0%	90.0%	90.0%	90.0%	90.0%	90.0%
Fully Insured *	2,007,374	2,011,389	2,015,412	2,019,443	2,023,482	2,027,529
<i>Pct. of covered population</i>	34.6%	34.6%	34.6%	34.6%	34.6%	34.6%
HIGH POPULATION ESTIMATES:						
Covered by Health Ins.	6,014,387	6,026,416	6,038,469	6,050,546	6,062,647	6,074,772
<i>Percent of total population</i>	93.3%	93.3%	93.3%	93.3%	93.3%	93.3%
Fully Insured *	3,350,014	3,356,714	3,363,427	3,370,154	3,376,894	3,383,648
<i>Pct. of covered population</i>	55.7%	55.7%	55.7%	55.7%	55.7%	55.7%

* Including direct purchase

ANNUAL COST PER MEMBER						
Net Benefit Cost	\$3,393	\$3,661	\$3,951	\$4,263	\$4,600	\$4,963
<i>Underlying trend</i>	8.3000%	7.9000%	7.9000%	7.9000%	7.9000%	7.9000%
Gross Premium	\$3,856	\$4,161	\$4,489	\$4,844	\$5,227	\$5,640
<i>Margin as % of gross premium</i>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
TOTAL COST FOR FULLY INSURED PLANS						
LOW-POPULATION COST ESTIMATES:						
Benefit Costs (\$millions)	\$6,812	\$7,365	\$7,962	\$8,608	\$9,307	\$10,062
Gross Premiums (\$millions)	\$7,741	\$8,369	\$9,048	\$9,782	\$10,576	\$11,435
HIGH-POPULATION COST ESTIMATES:						
Benefit Costs (\$millions)	\$11,368	\$12,290	\$13,288	\$14,366	\$15,532	\$16,793
Gross Premiums (\$millions)	\$12,918	\$13,966	\$15,100	\$16,325	\$17,650	\$19,083

Cost Projections for Prostate Screening Mandates

Part 1c: Projected Health Insurance Costs Under Current Law

(Population Projection: Best Estimate)

(Underlying Trends in Per-Member Costs: Low and High)

2004 2005 2006 2007 2008 2009

LOW UNDERLYING TREND:

PER-MEMBER PER-MONTH COST

Net Benefit Cost	\$279.95	\$299.05	\$319.45	\$341.24	\$364.51	\$389.38
<i>Underlying trend</i>	7.2170%	6.8210%	6.8210%	6.8210%	6.8210%	6.8210%
Gross Premium	\$318.13	\$339.83	\$363.01	\$387.77	\$414.22	\$442.47
<i>Margin as % of gross premium</i>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%

ANNUAL COST PER MEMBER

Net Benefit Cost	\$3,359	\$3,589	\$3,833	\$4,095	\$4,374	\$4,673
Gross Premium	\$3,818	\$4,078	\$4,356	\$4,653	\$4,971	\$5,310

TOTAL COST FOR FULLY INSURED PLANS

Benefit Costs (\$millions)	\$7,854	\$8,407	\$8,998	\$9,631	\$10,309	\$11,034
Gross Premiums (\$millions)	\$8,925	\$9,553	\$10,225	\$10,945	\$11,715	\$12,539

HIGH UNDERLYING TREND:

PER-MEMBER PER-MONTH COST

Net Benefit Cost	\$285.61	\$311.25	\$339.20	\$369.66	\$402.85	\$439.02
<i>Underlying trend</i>	9.3830%	8.9790%	8.9790%	8.9790%	8.9790%	8.9790%
Gross Premium	\$324.56	\$353.70	\$385.46	\$420.07	\$457.78	\$498.89
<i>Margin as % of gross premium</i>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%

ANNUAL COST PER MEMBER

Net Benefit Cost	\$3,427	\$3,735	\$4,070	\$4,436	\$4,834	\$5,268
Gross Premium	\$3,895	\$4,244	\$4,625	\$5,041	\$5,493	\$5,987

TOTAL COST FOR FULLY INSURED PLANS

Benefit Costs (\$millions)	\$8,013	\$8,750	\$9,555	\$10,434	\$11,393	\$12,441
Gross Premiums (\$millions)	\$9,106	\$9,943	\$10,858	\$11,856	\$12,947	\$14,137

Cost Projections for Prostate Screening Mandates

**Part 2a: Projected Health Insurance Costs Under House Bill No. 1121,
Senate Bill No. 926, House Bill No. 170, or House Bill No. 1515**

(Population Projection: Best Estimate)

(Underlying Trend in Per-Member Costs: Medium)

(Low Estimate of Legislation's Impact: 0.0000%)

OMITTED

**(SAME AS PROJECTED HEALTH INSURANCE COSTS
UNDER CURRENT LAW AS SHOWN IN PART 1a)**

Cost Projections for Prostate Screening Mandates

Part 2b(i): Projected Health Ins. Costs Under House Bill No. 1121, Senate Bill No. 926, and House Bill No. 170

(Population Projection: *Best Estimate*)

(Underlying Trend in Per-Member Costs: *Medium*)

(Med. Estimate of Legislation's Impact: *0.0005%*)

	2004	2005	2006	2007	2008	2009
PER-MEMBER PER-MONTH COST						
Net Benefit Cost	\$282.78	\$305.12	\$329.23	\$355.24	\$383.30	\$413.58
<i>Trend plus parity impact</i>	8.3000%	7.9006%	7.9000%	7.9000%	7.9000%	7.9000%
Gross Premium	\$321.34	\$346.73	\$374.12	\$403.68	\$435.57	\$469.98
<i>Margin as % of gross premium</i>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
ANNUAL COST PER MEMBER						
Net Benefit Cost	\$3,393	\$3,661	\$3,951	\$4,263	\$4,600	\$4,963
Gross Premium	\$3,856	\$4,161	\$4,489	\$4,844	\$5,227	\$5,640
TOTAL COST FOR FULLY INSURED PLANS						
Benefit Costs (\$millions)	\$7,934	\$8,578	\$9,274	\$10,026	\$10,840	\$11,720
Gross Premiums (\$millions)	\$9,016	\$9,747	\$10,538	\$11,394	\$12,318	\$13,318

INCREASE IN PER-MEMBER PER-MONTH COST

Net Benefit Cost	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Gross Premium	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

INCREASE IN ANNUAL COST PER MEMBER

Net Benefit Cost	\$0.00	\$0.02	\$0.02	\$0.02	\$0.02	\$0.03
Gross Premium	\$0.00	\$0.02	\$0.02	\$0.03	\$0.03	\$0.03

INCREASE IN TOTAL COST FOR FULLY INSURED PLANS

Benefit Costs (\$millions)	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1	\$0.1
Gross Premiums (\$millions)	\$0.0	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1

Cost Projections for Prostate Screening Mandates

Part 2b(ii): Projected Health Insurance Costs Under House Bill No. 1515

(Population Projection: Best Estimate)

(Underlying Trend in Per-Member Costs: Medium)

(Med. Estimate of Legislation's Impact: 0.0029%)

	2004	2005	2006	2007	2008	2009
PER-MEMBER PER-MONTH COST						
Net Benefit Cost	\$282.78	\$305.13	\$329.23	\$355.24	\$383.31	\$413.59
<i>Trend plus parity impact</i>	8.3000%	7.9031%	7.9000%	7.9000%	7.9000%	7.9000%
Gross Premium	\$321.34	\$346.74	\$374.13	\$403.69	\$435.58	\$469.99
<i>Margin as % of gross premium</i>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
ANNUAL COST PER MEMBER						
Net Benefit Cost	\$3,393	\$3,662	\$3,951	\$4,263	\$4,600	\$4,963
Gross Premium	\$3,856	\$4,161	\$4,490	\$4,844	\$5,227	\$5,640
TOTAL COST FOR FULLY INSURED PLANS						
Benefit Costs (\$millions)	\$7,934	\$8,578	\$9,274	\$10,027	\$10,840	\$11,720
Gross Premiums (\$millions)	\$9,016	\$9,748	\$10,539	\$11,394	\$12,319	\$13,318

INCREASE IN PER-MEMBER PER-MONTH COST

Net Benefit Cost	\$0.00	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01
Gross Premium	\$0.00	\$0.01	\$0.01	\$0.01	\$0.01	\$0.01

INCREASE IN ANNUAL COST PER MEMBER

Net Benefit Cost	\$0.00	\$0.10	\$0.11	\$0.12	\$0.13	\$0.14
Gross Premium	\$0.00	\$0.12	\$0.13	\$0.14	\$0.15	\$0.16

INCREASE IN TOTAL COST FOR FULLY INSURED PLANS

Benefit Costs (\$millions)	\$0.0	\$0.2	\$0.3	\$0.3	\$0.3	\$0.3
Gross Premiums (\$millions)	\$0.0	\$0.3	\$0.3	\$0.3	\$0.4	\$0.4

Cost Projections for Prostate Screening Mandates

Part 2c(i): Projected Health Ins. Costs Under House Bill No. 1121, Senate Bill No. 926, and House Bill No. 170

(Population Projection: *Best Estimate*)

(Underlying Trend in Per-Member Costs: *Medium*)

(High Estimate of Legislation's Impact: *0.0011%*)

	2004	2005	2006	2007	2008	2009
PER-MEMBER PER-MONTH COST						
Net Benefit Cost	\$282.78	\$305.12	\$329.23	\$355.24	\$383.30	\$413.58
<i>Trend plus parity impact</i>	8.3000%	7.9012%	7.9000%	7.9000%	7.9000%	7.9000%
Gross Premium	\$321.34	\$346.73	\$374.12	\$403.68	\$435.57	\$469.98
<i>Margin as % of gross premium</i>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
ANNUAL COST PER MEMBER						
Net Benefit Cost	\$3,393	\$3,661	\$3,951	\$4,263	\$4,600	\$4,963
Gross Premium	\$3,856	\$4,161	\$4,489	\$4,844	\$5,227	\$5,640
TOTAL COST FOR FULLY INSURED PLANS						
Benefit Costs (\$millions)	\$7,934	\$8,578	\$9,274	\$10,027	\$10,840	\$11,720
Gross Premiums (\$millions)	\$9,016	\$9,747	\$10,538	\$11,394	\$12,318	\$13,318

INCREASE IN PER-MEMBER PER-MONTH COST

Net Benefit Cost	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Gross Premium	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.01

INCREASE IN ANNUAL COST PER MEMBER

Net Benefit Cost	\$0.00	\$0.04	\$0.04	\$0.05	\$0.05	\$0.05
Gross Premium	\$0.00	\$0.04	\$0.05	\$0.05	\$0.06	\$0.06

INCREASE IN TOTAL COST FOR FULLY INSURED PLANS

Benefit Costs (\$millions)	\$0.0	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1
Gross Premiums (\$millions)	\$0.0	\$0.1	\$0.1	\$0.1	\$0.1	\$0.1

Cost Projections for Prostate Screening Mandates

Part 2c(ii): Projected Health Insurance Costs Under House Bill No. 1515

(Population Projection: Best Estimate)

(Underlying Trend in Per-Member Costs: Medium)

(High Estimate of Legislation's Impact: 0.0057%)

	2004	2005	2006	2007	2008	2009
PER-MEMBER PER-MONTH COST						
Net Benefit Cost	\$282.78	\$305.14	\$329.24	\$355.25	\$383.32	\$413.60
<i>Trend plus parity impact</i>	8.3000%	7.9062%	7.9000%	7.9000%	7.9000%	7.9000%
Gross Premium	\$321.34	\$346.75	\$374.14	\$403.70	\$435.59	\$470.00
<i>Margin as % of gross premium</i>	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
ANNUAL COST PER MEMBER						
Net Benefit Cost	\$3,393	\$3,662	\$3,951	\$4,263	\$4,600	\$4,963
Gross Premium	\$3,856	\$4,161	\$4,490	\$4,844	\$5,227	\$5,640
TOTAL COST FOR FULLY INSURED PLANS						
Benefit Costs (\$millions)	\$7,934	\$8,578	\$9,274	\$10,027	\$10,841	\$11,721
Gross Premiums (\$millions)	\$9,016	\$9,748	\$10,539	\$11,394	\$12,319	\$13,319

INCREASE IN PER-MEMBER PER-MONTH COST

Net Benefit Cost	\$0.00	\$0.02	\$0.02	\$0.02	\$0.02	\$0.02
Gross Premium	\$0.00	\$0.02	\$0.02	\$0.02	\$0.02	\$0.03

INCREASE IN ANNUAL COST PER MEMBER

Net Benefit Cost	\$0.00	\$0.21	\$0.23	\$0.24	\$0.26	\$0.28
Gross Premium	\$0.00	\$0.24	\$0.26	\$0.28	\$0.30	\$0.32

INCREASE IN TOTAL COST FOR FULLY INSURED PLANS

Benefit Costs (\$millions)	\$0.0	\$0.5	\$0.5	\$0.6	\$0.6	\$0.7
Gross Premiums (\$millions)	\$0.0	\$0.6	\$0.6	\$0.7	\$0.7	\$0.8

III. METHODS, ASSUMPTIONS, AND SOURCES

We used the following methods and assumptions, with the sources noted, to derive the results shown and described in the first section of this report:

1. We took the 2002 Massachusetts population by age group and health insurance status (whether covered, and by what type of insurance) from the U.S. Census Bureau's Current Population Survey (CPS), 2003 Annual Social and Economic Supplement. Overlap categories (e.g., Medicaid and Medicare; Medicare and private health insurance) were allocated to the contributing categories in a manner that we considered to be reasonable and internally consistent. The numbers in each category were adjusted so that the sum equaled the most recent estimate of the total population of Massachusetts in 2002 from the U.S. Census Bureau.
2. The percentage of persons covered by employment-based insurance plans that are self-funded (as opposed to fully insured) was taken from the Medical Expenditure Panel Survey (MEPS) for 2001, produced by the U.S. Agency for Healthcare Research and Quality (AHRQ).
3. The percentage of the population that is male (48.2%), the percentage of males who are in the 40-49 age group (15.25%) or the 50-64 age group (15.48%), and the percentage who are African American (5.40% of the total population and 5.70% of the uninsured population, and therefore 5.37% of the insured population) were provided to us by the Division.
4. The result derived from Steps 1 through 3 was used as the low estimate of the "fully insured population" in Massachusetts in 2002 (including those who were covered by non-group policies that were purchased directly).

We developed a high estimate of the fully insured population as follows:

- a. In place of the CPS statistics on the percentage of each age group that was uninsured in 2002, we used the corresponding statistics from the Division's report entitled *Health Insurance Status of Massachusetts Residents (Third Edition)*, published in January 2003.
- b. In place of the MEPS statistic on the percentage of persons covered by employment-based insurance who are in self-funded plans, we used the corresponding statistic from the Division's *2001 Employer Survey*.

We used a 75%/25% weighting of the low and high population distributions, respectively, to produce the "best estimate" distribution. The low, high, and "best estimate" population distributions are shown in Exhibits A-1 through A-3.

5. The population growth rate for the projections is equal to the rate of growth of the population of Massachusetts between 2002 and 2003, as reported by the U.S. Census Bureau.

6. For Massachusetts residents with employment-based coverage, we determined the average premium per contract and the distribution of contracts by family status from the MEPSnet/IC database maintained by AHRQ. The distribution by family status (Single, Plus One, and Family) enabled us to estimate the average number of members per contract and from that derive the average premium per member. From this source we also got the same information on premiums and contract distributions for private-sector employers vs. public-sector employers (based on regional statistics for New England for the public employers), and for private-sector employers of different sizes. Finally, we took the ratio of premiums for direct-purchase policies vs. employment-based plans from *The Economic Burden of Health Care and Illness on Typical Massachusetts Families*, a report written by Dryfoos, Kuhlthau, Bigby, Hanrahan, Lassen, and Robinson and sponsored by the Women's Education and Industrial Union, Boston, MA.
7. The net benefit costs were derived by assuming that 10% of the gross premium for employer-sponsored plans and 25% of the premium for individually purchased policies was used to cover the health insurers' expenses and margins. This works out to an average margin of about 12% across both types of coverage.
8. All benefit cost projections utilized underlying per-member cost trends derived from the National Health Expenditure (NHE) projections, which are produced each year by the Office of the Actuary at the Centers for Medicare and Medicaid Services (CMS). The trend factors under the medium underlying trend scenario are 1.192 for 2003 (i.e., 2003 per-person costs are 19.2% higher than 2002 costs), 1.083 for 2004, and 1.079 for each year from 2005 through 2009. For the low underlying trend scenario, the trend factors for 2004 and for 2005 through 2009 were multiplied by 0.99. For the high underlying trend scenario, the trend factors for 2004 and for 2005 through 2009 were multiplied by 1.01.
9. Data on current utilization rates and unit costs for the services specified in the proposed bills, as well as data on current coverage provisions under plans and policies offered by Massachusetts health insurers, were provided by the Division from the survey responses they received from participating Massachusetts health insurers. This data is summarized in Exhibits A-4 and A-5.
10. Target utilization rates for the services specified in the proposed bills are based on the recommendations of various medical professional organizations. A summary of these recommendations was provided to us by the Division. An initial target utilization rate was assigned to a given organization for a given age- and race-based subgroup as follows:
 - a. If the organization does not recommend the use of a specified service for screening purposes for that subgroup (or if the organization finds that there is insufficient evidence to recommend for or against the use of that service as a screening tool), then we assigned a target utilization rate of 0%.
 - b. If the organization recommends only that people in that subgroup be counseled by their physicians about the risks and possible benefits associated with a particular screening method, then we assigned a target utilization rate of 33.3%

- c. If the organization recommends that persons in that subgroup be screened for prostate cancer using the specified service, then we assigned a target utilization rate of 67.7%.

We did not assign a 100% target utilization rate to any organization/subgroup combination, for two reasons: (i) In each case in which an organization recommends that a subgroup be screened, it says this should occur only if the *patient elects* to be screened, after being informed of the benefits and limitations of the screening process. (ii) Ultimately, our goal was not to determine the level of screening that *should* occur, but the level of screening that is *likely* to occur if all financial and other coverage-related barriers are removed.

11. Initial target utilization rates for PSA/DRE were adjusted to reflect any caveats in an organization's recommendation. For example, in some cases screening is recommended only for those members of a subgroup whose remaining life expectancy is at least 10 years. Based on the RP-2000 table of mortality rates for males published by the Society of Actuaries (weighted between disabled and non-disabled lives based on data from the U.S. Census Bureau's report entitled "Americans with Disabilities: 1997"), we estimated that the average 10-year survival probability would be 94.23% for males age 40 – 49 and 82.94% for males age 50 – 64. Thus, if the screening recommendation is contingent upon the patient having a 10-year remaining life expectancy, then we multiplied the initial target utilization rate by 0.9423 or 0.8294 (depending on which age bracket the recommendation applies to).

Another caveat that sometimes was used was that the patient have a high risk for (or family history of) prostate cancer. In the absence of any statistics on this specific characteristic (that we are aware of), we assumed that the percentage of covered males who are at high risk for prostate cancer is equal to the lifetime risk of being diagnosed with invasive prostate cancer. According to Table XXII-6 of the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Cancer Statistics Review for 1975-2001, this probability is 17.6% for whites (which we used as a proxy for the lifetime risk for all non-African-American males) and 17.8% for all races combined.

It should be noted that the target utilization rate for TRUS is 0% across the board – that is, from all organizations that have issued a recommendation on TRUS (with regard to prostate cancer screening), and for all population subgroups. Thus, no further adjustment to the target utilization rate for TRUS was necessary.

12. The results derived from Steps 10 and 11 are shown in Exhibit A-6. The organizations indicated across the top of the exhibit are:
- American Academy of Family Practitioners
 - U.S. Preventive Services Task Force
 - American Urologic Association and American Cancer Society
 - National Cancer Institute (peer review panel)
 - American Society of Clinical Oncology
 - American Medical Association
 - American College of Physicians
 - American Society of Internal Medicine

Two other organizations whose recommendations were researched by the Division are the Canadian Task Force on Preventive Health Care and Empire Medicare Services of New York. These are the only organizations for which we have recommendations regarding TRUS; both of them found that there is sufficient evidence to recommend against the use of TRUS as a screening test.

The average of the final target utilization rates for PSA/DRE that were assigned to (or computed for) the various medical professional organizations are as follows:

Males Under Age 40	0.0%
African American Males, Age 40-49	18.5%
Non-Afr.-Am. Males, Age 40-49	7.2%
African American Males, Age 50-64	26.9%
Non-Afr.-Am. Males, Age 50-64	25.3%

13. To estimate the utilization increases (over and above the current utilization rates) that might be experienced under each of the proposed bills, we made the following assumptions regarding the *maximum* expected utilization rates:
- If the proposed bill does not address a particular population subgroup (e.g., men under 40, in the case of HB 1121, SB 926, or HB 170) or a given screening test (e.g., TRUS, in the case of these same bills), then we assumed that no increase in utilization would occur as a result of the bill being enacted. That is, the maximum utilization rate in such cases was set equal to the current utilization rate for that population subgroup and specific screening procedure.
 - For persons who already have coverage for a given screening test (e.g., for most men in the targeted population subgroups, with regard to PSA/DRE), we assumed that no increase in utilization for that screening test would occur as a result of any of the bills being enacted.
 - For those who would be covered for a given screening test for the first time as a result of a proposed bill, we assumed a maximum utilization rate of 150% of the greater of (i) the current utilization rate for those who already have coverage for that test, and (ii) the average final target utilization rate derived in Steps 10 through 12 above.
 - The maximum utilization rate was calculated as the weighted average of the maximum rate for those who already have coverage (step b.) and the maximum rate for those who would be covered for the first time (step c.). The maximum utilization *increase* (i.e., the rise in utilization that would be expected under the high-impact scenario) was then computed as the difference between the weighted average maximum utilization rate and the current utilization rate.

The *intermediate* expected utilization increase (i.e., the increase expected under the medium-impact scenario) was assumed to be half of the maximum expected increase. The resulting maximum and intermediate utilization rates and utilization increases, for each bill, population subgroup, and specified screening procedure, are shown in Exhibit A-

Appendix II: Testimony submitted



June 30, 2004

Maria Schiff
Health Policy Manager
Massachusetts Division of Health Care Finance and Policy
Two Boylston Street
Boston, MA 02116

Dear Maria:

The Massachusetts Association of Health Plans, on behalf of our member health plans, which provide health care coverage to approximately 2.2 million Massachusetts residents, appreciates the opportunity to offer our comments as part of the mandate review process concerning proposed HB 1121, SB 926, HB 170, and HB 1515 which would mandate coverage for PSA tests, digital rectal exams and, in HB 1515, transrectal ultrasonography, in most cases with broad parameters for coverage.

As our plans have indicated in their responses to your survey, the tests mandated by these bills are already covered when clinically appropriate. MAHP and its member health plans recognize the importance of screening for prostate cancer, covering the procedure when it is ordered by a patient's primary care physician, making it unnecessary for the Legislature to mandate this coverage. In addition, several commentaries raise serious medical concerns about such overly broad applications of prostate cancer testing.

In 2002, the Pennsylvania Health Care Cost Containment Council reviewed a similar mandate and found that there was not "sufficient evidence to support this legislation in its present form. While recognizing the importance of preventive screenings, the Council did not find sufficient evidence to recommend that health insurance policies provide coverage for all costs associated with an annual prostate specific antigen (PSA) test for men age 50 and older, or men under age 50 upon a physician's recommendation." The report went on to state that:

- Many recognized organizations including the U.S. Preventive Services Task Force, the Centers for Disease Control and Prevention, the American College of Physicians and the National Cancer Institute do not recommend universal prostate cancer screening for asymptomatic men.
- There is no definitive connection between screening for prostate cancer and a reduction in prostate cancer mortality. The National Cancer Institute states, "There is insufficient evidence to establish whether a decrease in mortality from prostate cancer occurs with screening." Concerns were raised about mandating a particular procedure or test that has not been clinically proven to improve the quality or longevity of life for prostate cancer patients. Further, placing a single test or medical procedure into statute might not make good public policy since the test or procedure could be outmoded or disfavored in the future.

In December 2002 the U.S. Preventive Services Task Force (USPSTF) released its recommendations on Prostate Cancer for Screening, stating that evidence is insufficient to recommend for or against routine screening for prostate cancer using prostate specific antigen (PSA) testing or digital rectal examination (DRE). It also pointed out that screening is associated with important harms, including frequent false-positive results and unnecessary anxiety, biopsies, and potential complications of treatment of some cancers that may never have affected a patient's health. Finally, the task force stated that no conclusive direct evidence shows that screening reduces mortality from prostate cancer. The summary of the USPSTF report is attached below.

Our plans recognize the importance and value of screenings for prostate cancer and do cover such testing when recommended by a member's treating physician. However, mandating broader coverage is unnecessary, not cost effective and potentially dangerous in circumstances where there is no clinical basis for the testing and there is significant potential for harm to the patient.

Please let me know if you have any questions or if there is any other information we can provide.

Sincerely Yours,

A handwritten signature in black ink, appearing to read "Marylou Buyse, M.D.", with a stylized flourish at the end.

Marylou Buyse, M.D.
President



MASSACHUSETTS

July 1, 2004

Maria Schiff
Health Policy Manager
Massachusetts Division of Health Care Finance and Policy
Two Boylston Street
Boston MA 02116

Re: Mandate Review Analysis of PSA tests (SB 926, HB 1121), length of stay for mastectomies (SB 845), lymphedema (SB 848 and HB 1309), and scalp hair prosthesis (SB 916 and HB 3180)

Dear Ms. Schiff:

On behalf of the 11,000 small business owners in Massachusetts who are members of the National Federation of Independent Business, I wish to express our opposition to the following mandates which are currently being reviewed by the Division of Health Care Finance and Policy: PSA tests (SB 926, HB 1121), length of stay for mastectomies (SB 845), lymphedema (SB 848 and HB 1309), and scalp hair prosthesis (SB 916 and HB 3180).

We have been strong supporters of the health care mandate review process since it was first enacted in 2002 because we believe that this process has proven effective in preventing the enactment of health care mandates that do not have significant impact on public health or are not cost-effective.

Health care mandates in Massachusetts account for approximately 15-20% of the cost of health insurance. In addition, mandates have a disproportionate impact on domestic small businesses that are neither regulated by the federal ERISA laws nor large enough to self-insure. Mandates raise the cost of basic health insurance coverage, and they reduce the flexibility of small-business owners to provide desired insurance benefits for themselves and their employees. Since the high cost of health insurance (four successive years of double-digit annual cost inflation) is the primary cause of the rapidly increasing uninsured population, we oppose any new mandates which further increase the cost of health insurance coverage and decrease the accessibility to affordable health insurance coverage for the owners and employees of small businesses in Massachusetts.

Thank you for your consideration.

Very truly yours,

A handwritten signature in black ink that reads "William B. Vernon". The signature is fluid and cursive, with the first name "William" and last name "Vernon" clearly distinguishable.

William B. Vernon
State Director